



POLYCARB

Connection Zindagi Ka

ISO

9001:2008

ISO

14001:2004

OHSAS

18001:2007

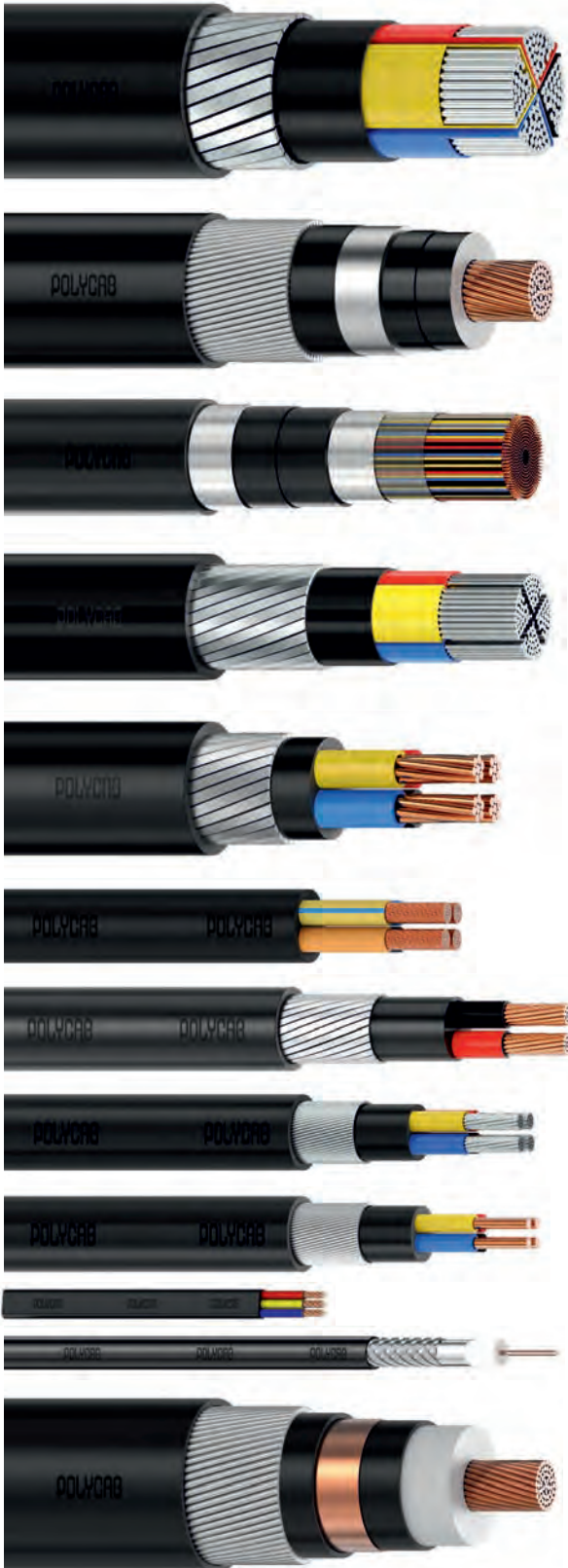


IS:7098 (Part I)

DETAILS
MAKE THE
DIFFERENCE

XLPE INSULATED
HEAVY DUTY CABLES
650 / 1100V.





- L.V. PVC & XLPE POWER CABLES WITH COPPER AND ALUMINIUM CONDUCTOR
- L.V. PCV & XLPE CONTROL CABLES WITH COPPER CONDUCTOR
- M.V. POWER CABLES UPTO 33 kV
- EHV CABLES FROM 66kV TO 220kV
- ZERO HALOGEN CABLES
- FIRE SURVIVAL CABLES (FS)
- INSTRUMENTATION CABLES SCREENED / UNSCREENED
- INDUSTRIAL BRAIDED CABLES
- THERMO COUPLE / COMPENSATING CABLES
- LEAD SHEATHED CABLES
- RUBBER CABLES
- RAILWAY SIGNALLING CABLES
- TELEPHONE CABLES DRY & JELLY FILLED
- BUILDING WIRES FR / FRLS / FRZH / FRLF / FRFS
- SINGLE CORE INDUSTRIAL FLEXIBLES PVC / FR / FRLS / FRZH / HRFR / HR / HR-FRLS / FRLF / FRFS
- MULTI CORE INDUSTRIAL FLEXIBLE CABLES
- SUBMERSIBLE FLAT AND ROUND CABLES
- COAXIAL CABLES
- LAN CAT-5E / CAT 6 CABLES
- WELDING CABLES
- SOLAR AC / DC CABLES
- STEEL BRAIDED CABLES
- SPECIALITY CABLES SUITED FOR MARINE / OIL & GAS / EXTREME FIRE CONDITIONS / HIGHLY CORROSIVE ENVIRONMENT / TRAFFIC / AIRCRAFT / SPACE STATION / AUTOMOBILES
- OPTIC FIBRE CABLES

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COMPANY PROFILE

POLYCAB AN ISO 9001:2008, ISO 14001:2004, OHSAS 18001:2007 COMPANY IS INDIA'S NO.1 CABLES & WIRES COMPANY WITH A GLORIOUS TRACK RECORD OF OVER 4 DECADES. OUR MANUFACTURING FACILITIES AT HALOL (VADODARA), DAMAN, NASHIK AND ROORKEE IN INDIA, ADDRESSES TO THE SPECIFIC NEEDS WITH STATE-OF-THE-ART MACHINERY AND TECHNOLOGY.

POLYCAB'S TURNOVER HAS CROSSED INR 6000 CRORE'S IN THE FISCAL YEAR 2016-17. POLYCAB DERIVES ITS STRENGTH FROM ITS CUSTOMERS AND THOSE BEING IN SECTORS LIKE UTILITIES, POWER GENERATION, TRANSMISSION & DISTRIBUTION, PETROLEUM & OIL REFINERIES, OEMs, EPC CONTRACTORS, STEEL & METAL, CEMENT, CHEMICAL, ATOMIC ENERGY, NUCLEAR PLANTS, AS WELL AS GOVERNMENT PARTNERS LIKE BSNL, RAILWAYS AND PRIVATE TELECOM OPERATORS LIKE RELIANCE, VODAFONE, AIRTEL, AIRCEL, TATA, IDEA AND MANY MORE.

THINGS YOU DIDN'T KNOW ABOUT POLYCAB

BETWEEN ITS FACILITIES IN DAMAN, HALOL (VADODARA), NASHIK AND ROORKEE THE COMPANY HAS 3.5 MILLION SQUARE FEET OF MANUFACTURING SPACE.

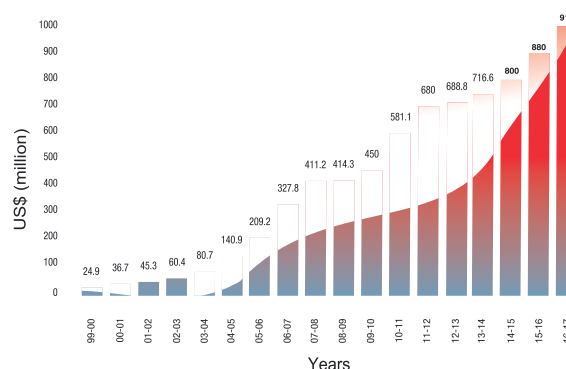
POLYCAB MANUFACTURES ENOUGH CABLE EACH YEAR TO CIRCUMNAVIGATE THE EARTH THREE AND A HALF TIMES AND ENOUGH WIRE TO GO TO THE MOON AND COME BACK - FOUR TIMES.

POLYCAB HAS INCREASED ITS TURNOVER 100 TIMES IN SIXTEEN YEARS.

OVER 300 AUTHORISED DISTRIBUTORS SERVICE ITS INDIA NEEDS AND ITS OVERSEAS INTERESTS.

POLYCAB OFFERS A VARIETY OF SERVICES:

- COMMERCIALLY REASONABLE PRICES
- RELIABLE & CONSISTENT QUALITY
- PRODUCT DEVELOPMENT AS PER MARKET
- A TARGET STOCKING POLICY
- TECHNICAL SUPPORT FOR APPLICATION





CERTIFICATE



This is to certify that

Polycab India Limited
Polycab House 771
Pandit Satwalekar Marg
Maitem (West)
Mumbai - 400 016
Maharashtra
INDIA

with the organizational units/sites as listed in the annex

has implemented and maintains an
Occupational Health and Safety Management System.

Scope:
The Occupational Health & Safety activities and supporting processes associated with the Design and Manufacture of PVC and XLPE compound.
The Occupational Health & Safety activities and supporting processes associated with the manufacture of Conductors, Wires and Cables.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 45001 : 2018

Certificate registration no.	20002384 OHS18
Date of original certification	2010-06-22
Date of revision	2019-09-10
Date of certification	2018-07-13
Valid until	2021-03-12



DQS Inc.
Brad McGuire
Brad McGuire
Managing Director

Accredited Body: DQS Inc., 1500 McConor Parkway, Suite 405, Schaumburg, IL 60173 USA
Administrative Office: Deutsch Quality Systems (India) Pvt. Ltd., 5th Floor, Arjuna Tech Park, 147, 148, Airport Road, Kothrud, Bangalore - 560 017 - India

1 / 5



CERTIFICATE



This is to certify that

Polycab India Limited
Polycab House 771
Pandit Satwalekar Marg
Maitem (West)
Mumbai - 400 016
Maharashtra
INDIA

with the organizational units/sites as listed in the annex

has implemented and maintains an **Environmental Management System.**

Scope:
The Environmental activities and supporting processes associated with the Design and Manufacture of PVC and XLPE compound.
The Environmental activities and supporting processes associated with the Manufacture of Conductors, Wires and Cables.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 14001 : 2015

Certificate registration no.	20002384 UM
Date of original certification	2010-06-22
Date of revision	2019-09-10
Date of certification	2018-07-13
Valid until	2021-07-12



DQS Inc.
Brad McGuire
Brad McGuire
Managing Director

Accredited Body: DQS Inc., 1500 McConor Parkway, Suite 405, Schaumburg, IL 60173 USA
Administrative Office: Deutsch Quality Systems (India) Pvt. Ltd., 5th Floor, Arjuna Tech Park, 147, 148, Airport Road, Kothrud, Bangalore - 560 017 - India

1 / 5



CERTIFICATE



This is to certify that

Polycab India Limited
Polycab House 771
Pandit Satwalekar Marg
Maitem (West)
Mumbai - 400 016
Maharashtra
INDIA

with the organizational units/sites as listed in the annex

has implemented and maintains a **Quality Management System.**

Scope:
The Design and Manufacture of PVC, XLPE, ZHFR and EBNL Compound and Ceiling Fans.
The Manufacture of Galvanized Steel Wires, Strips, Conductors, Wires & Cables, Switchgears, Conduits & Fittings and Tapes.
Trading of LED Lights, Fans, Switches & Luminaries
Engineering, Procurement & Construction (EPC) of EHV, HV & LT Electrical Work, Fire Alarm System and Public Address Systems.

Through an audit, documented in a report, it was verified that the management system fulfills the requirements of the following standard:

ISO 9001 : 2015

Certificate registration no.	20002384 QM15
Date of original certification	1999-04-27
Date of revision	2019-09-10
Date of certification	2018-07-13
Valid until	2021-07-12



DQS Inc.
Brad McGuire
Brad McGuire
Managing Director

Accredited Body: DQS Inc., 1500 McConor Parkway, Suite 405, Schaumburg, IL 60173 USA
Administrative Office: Deutsch Quality Systems (India) Pvt. Ltd., 5th Floor, Arjuna Tech Park, 147, 148, Airport Road, Kothrud, Bangalore - 560 017 - India

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BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/034
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 6724:2016 Incorporating Compenda Nos. 1 and 2 Electric cables - Thermosetting insulated, armoured cables for voltages of 600/1000V and 1900/3300V having low emission of smoke and corrosive gases when affected by fire
 Type of Cable: Table 4 - Single-core 600/1000V cables with copper conductor
 Range of Approval: 50sqmm to 1000sqmm nominal cross-sectional area of conductors inclusive
 Single-core
 Sheath - LTS1 Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC

YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables
 19/12/2018

UKAS PRODUCT CERTIFICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/033
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 5467:2016 Incorporating Compendium No. 1 Electric cables - Thermosetting insulated, armoured cables for voltages of 600/1000V and 1900/3300V
 Type of Cable: Table 9 - Multicore auxiliary 600/1000V cables with copper conductors
 Range of Approval: 1.5sqmm to 4sqmm nominal cross-sectional area of conductors inclusive
 7-core to 27-core inclusive
 Sheath - Type 9 Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC

YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables
 19/12/2018

UKAS PRODUCT CERTIFICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/036
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 6724:2016 Incorporating Compenda Nos. 1 and 2 Electric cables - Thermosetting insulated, armoured cables of rated voltages of 600V and 1900/3300V for fixed installations having low emission of smoke and corrosive gases when affected by fire - Specification
 Type of Cable: Table 9 - Multicore auxiliary 600/1000V cables with copper conductors
 Range of Approval: 1.5sqmm to 4sqmm nominal cross-sectional area of conductors inclusive
 7-core to 27-core inclusive
 Sheath - LTS1 Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC

YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables
 19/12/2018

UKAS PRODUCT CERTIFICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/035
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 6724:2016 Incorporating Compenda Nos. 1 and 2 Electric cables - Thermosetting insulated, armoured cables of rated voltages of 600/1000V and 1900/3300V for fixed installations having low emission of smoke and corrosive gases when affected by fire - Specification
 Type of Cable: Tables 5, 6, 7 and 8 - Two-core, three-core, four-core and five-core 600/1000V cables with copper conductors
 Range of Approval: 1.5sqmm to 400sqmm nominal cross-sectional area of conductors inclusive
 Two-core to four-core inclusive
 1.5sqmm to 70sqmm nominal cross-sectional area of conductors inclusive
 Five-core
 Sheath - LTS1 Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC

YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables
 19/12/2018

UKAS PRODUCT CERTIFICATION

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/032
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 5467:2016 Incorporating Corrigendum No. 1 Electric cables - Thermosetting insulated, armoured cables of rated voltages of 600/1000V and 1900/3300V for fixed installations - Specification
 Type of Cable: Tables 5, 6, 7 and 8 - Two-core, three-core, four-core and five-core 600/1000V cables with copper conductors
 Range of Approval: 1.5sqmm to 400sqmm nominal cross-sectional area of conductors inclusive. Two-core to four-core inclusive. 1.5sqmm to 70sqmm nominal cross-sectional area of conductor. Five-core.
 Sheath - Type 9. Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC
YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables:
 Trace Hunter Date: 19/12/2018

This Certificate and Schedule(s) remain the property of BASEC, and shall be returned when required.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Schedule

Schedule No: 176/001/031
 Licensee: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Factory: POLYCAB INDIA LIMITED, 74/8-11 DAMAN INDUSTRIAL ESTATE, VILLAGE KADAIYA, DAMAN-396210, UT, INDIA
 Specification: BS 5467:2016 Incorporating Corrigendum No. 1 Electric cables - Thermosetting insulated, armoured cables of rated voltages of 600/1000V and 1900/3300V for fixed installations - Specification
 Type of Cable: Table 4 - Single-core 600/1000V cables with copper conductors
 Range of Approval: 50sqmm to 1000sqmm nominal cross-sectional area of conductors inclusive. Single-core.
 Sheath - Type 9. Insulation - GP8
 Origin Thread: Not applicable
 Origin Mark: POLYCAB

PERMISSIBLE MARKS

BASEC
YELLOW ACETATE THREAD

Expiry Date: 08/09/2021

Signed for and on behalf of the British Approvals Service for Cables:
 Trace Hunter Date: 19/12/2018

This Certificate and Schedule(s) remain the property of BASEC, and shall be returned when required.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Product Certification Licence

This is to certify that:
 Polycab India Limited
 74/8-11 Daman Industrial Estate
 Village Kadaiya
 Daman-396210
 UT
 India

Is licensed to use the BASEC Marks as defined in the BASEC Product Certification Requirements, in respect of products identified in the Product Certification Schedules listed in the Tables, shown below, which form an integral part of this Certificate.

Licence Number: 176
 Issue Date: 19th December 2018
 Expiry Date: 8th September 2021

Table Numbers: 176/001/T

This Certificate is issued subject to and in accordance with BASEC Regulations and continued compliance.

Signed for and on behalf of the British Approvals Service for Cables:
 Trace Hunter Date: 19/12/2018

This Certificate and Schedule(s) remain the property of BASEC, and shall be returned when required.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Table of Product Certificate Schedules

Polycab India Limited
 74/8-11 Daman Industrial Estate
 Village Kadaiya
 Daman-396210
 UT
 India

Table of Product Certification Schedules: 176/001/T

Schedule Number	Date of Issue	Expiry Date
176/001/031	19/12/2018	08/09/2021
176/001/032	19/12/2018	08/09/2021
176/001/033	19/12/2018	08/09/2021
176/001/034	19/12/2018	08/09/2021
176/001/035	19/12/2018	08/09/2021
176/001/036	19/12/2018	08/09/2021

Signed for and on behalf of the British Approvals Service for Cables:
 Trace Hunter Date: 19/12/2018

This Certificate and Schedule(s) remain the property of BASEC, and shall be returned when required.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

CERTIFICATION SCHEDULE

PCR includes requirements for Environmental issues directly relating to the Product and Manufacturing processes as well as limited Health & Safety issues directly relating to the Product and Manufacturing processes.

SITE:
Polycab India Limited
748-11 Daman Industrial Estate
Village Kadaiya
Daman - 396 210
UT
India

Incorporating the following sites:
Polycab India Limited (Unit-8)
Survey No. 38/1-4, 42/1 & 2, 43/1-3, 45/1 & 2, 46/5, 5 & 9, 41/4, 5, 6, 7, 8 & 9
Daman Industrial Estate, Village Kadaiya, Daman 396 210, India

Polycab India Limited
Survey No. 52/1-4, Daman Industrial Estate, Village Kadaiya, Daman 396 210, India

Polycab India Limited
Survey No. 52/1, 2 & 53/1, 3, 4 Daman Industrial Estate, Village Kadaiya, Daman 396 210, India

Polycab India Limited
Survey No. 74/7, Daman Industrial Estate, Village Kadaiya, Daman 396 210, India

SCOPE OF CERTIFICATION:
The manufacture and supply of the following cable and wire products:
Low Voltage Power and Control Cables up to and including 1 kV

Schedule No.: PCR-216/002 Issue No.: 06 Issue Date: 19th December 2018
Date of initial certification: 8th September 2009 Expiry Date: 8th September 2021
Last certification cycle expiry date: 20th June 2018

Not valid without the certificate No.: PCR-216

Signed for and on behalf of the British Approvals Service for Cables: *Trace Hunter* Date: 19/12/2018

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

CERTIFICATE OF CONFORMITY

BASEC hereby certifies that:

Polycab India Limited
Incorporating:
Head Office, 771 Polycab House, Mumbai, India
748-11 Daman Industrial Estate, UT

Has implemented and maintains a
Product Management System
that fulfils the requirements of the following
BASEC Product Certification Requirements
"Enhanced Quality Management Systems for Product Related Functions"

In respect of the site (s) and scope (s) specified, in the below schedule (s)

Schedule no.->
PCR-216/001
PCR-216/002

Certificate No.: PCR-216 Issue: 06 Issue Date: 19th December 2018
Date of initial certification: 8th September 2009 Expiry Date: 8th September 2021
Last certification cycle expiry date: 20th June 2018

Lack of fulfilment of conditions as set out in the certification agreement may render this Certificate invalid.
This certificate is issued subject to and in accordance with BASEC Regulations and continued compliance
Includes requirements for Environmental issues directly relating to the Product and Manufacturing processes as well as limited Health & Safety issues directly relating to the Product and Manufacturing processes.

Signed for and on behalf of the British Approvals Service for Cables: *Trace Hunter* Date: 19/12/2018

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

CERTIFICATION SCHEDULE

PCR includes requirements for Environmental issues directly relating to the Product and Manufacturing processes as well as limited Health & Safety issues directly relating to the Product and Manufacturing processes.

SITE:
Polycab India Limited
Head Office:
771 Polycab House
Pandit Satawalekar Marg,
Mogal Lane, Mahim (W)
Mumbai - 400 016
India

SCOPE OF CERTIFICATION
Head office activities including:
Sales, Purchasing, Design and Supply Chain, HR

Schedule No.: PCR-216/001 Issue No.: 06 Issue Date: 19th December 2018
Date of initial certification: 8th September 2009 Expiry Date: 8th September 2021
Last certification cycle expiry date: 20th June 2018

Not valid without the certificate No.: PCR-216

Signed for and on behalf of the British Approvals Service for Cables: *Trace Hunter* Date: 19/12/2018

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No.: PCR-216/001

Certificate of Conformity

BASEC hereby certifies that:

Polycab India Limited
771 Polycab House, Pandit Satawalekar Marg,
Mogal Lane, Mahim (W), 400 016, Mumbai, India

Has implemented and maintains a Management System that fulfils the requirements of:

BASEC PCR Issue 10 2019

In respect of the location listed above and for the following scope of activities:

Scope of Certification:

Head Office Activities including: Sales, Purchasing, Design and Supply Chain, HR

Issue no.: 7
Date of initial certification: 09/09/2009
Issue date: 07/08/2019

Signed for and on behalf of the British Approvals Service for Cables: *Trace Hunter* Date: 07/08/2019

If the conditions set out in the certification agreement are not fulfilled this Certificate may be rendered invalid.
This certificate is issued subject to ongoing surveillance for continued compliance, and in accordance with BASEC's Regulations.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Expiry date: 08/09/2021

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Certificate No.: PCR-216/002

Certificate of Conformity

BASEC hereby certifies that:

Polycab India Limited
748-11 Daman Industrial Estate
Village Kadaiya, Daman, 396210, UT, India

Has implemented and maintains a Management System that fulfils the requirements of:

BASEC PCR Issue 10 2019

In respect of the location listed above and for the following scope of activities:

Scope of Certification:

The manufacture and supply of the following cable and wire products: Low Voltage Power and Control Cables up to and including 1kV.
Incorporating the following sites: Polycab India Limited (Unit-8), Survey No. 38/1-4, 42/1 & 2, 43/1-3, 44/1-3, 46/1 & 2, 46/5, 5 & 9, 41/4, 5, 6, 7, 8 & 9, Daman Industrial Estate, Village Kadaiya, Daman 396 210, India; Polycab India Limited, Survey No. 52/1-4, Daman Industrial Estate, Village Kadaiya, Daman 396 210, India; Polycab India Limited, Survey No. 52/1, 2 & 53/1, 3, 4 Daman Industrial Estate, Village Kadaiya, Daman 396 210, India; Polycab India Limited, Survey No. 74/7, Daman Industrial Estate, Village Kadaiya, Daman 396 210, India.

Issue no.: 7
Date of initial certification: 09/09/2009
Issue date: 07/08/2019

Signed for and on behalf of the British Approvals Service for Cables: *Trace Hunter* Date: 07/08/2019

If the conditions set out in the certification agreement are not fulfilled this Certificate may be rendered invalid.
This certificate is issued subject to ongoing surveillance for continued compliance, and in accordance with BASEC's Regulations.

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

Expiry date: 08/09/2021

BASEC
BRITISH APPROVALS SERVICE FOR CABLES

XLPE insulated heavy duty cables were introduced worldwide in mid sixties. These cables have overcome the limitations of PVC Insulated Cables such as thermal degradation, poor moisture resistance and thermoplastic nature.

The advantages of XLPE Insulated cables in comparison to PVC insulated cables are as under:

APPLICATION :

The Cables are suitable for use on AC single phase or three phase (earthed or unearthed) systems for rated Voltage up to and including 1100 Volts. These Cables can be used on DC Systems for rated Voltage up to and including 1500 Volts to earth.

A. Technical Advantages:

1. Higher current rating, higher short circuit rating approx. 1.2 times that of PVC.
2. Thermosetting in nature.
3. Higher insulation resistance 1000 times more than PVC cables.
4. Higher resistance to moisture.
5. Better resistance to surge currents.
6. Low dielectric losses.
7. Better resistance to chemicals.
8. Longer service life.
9. Comparatively higher cable operation temperature 90°C and short circuit temperature 250°C

B. Commercial Advantages:

1. Lower laying cost because of comparatively smaller diameter of cable and higher weight*.
2. Lower installation charges as the diameter of cable is comparatively lesser with smaller bending radius, requiring less space requirement for laying cables.
3. **One size lower cable can be used as compared to PVC insulated cable.

*Density of XLPE is lower than PVC

** For longer cable length voltage drop shall be considered

Polycab Cables of 0.6 / 1 (1.2) KV 4C X 300 Sq. mm, 1C X 800 Sq. mm has been successfully type tested at DEKRA - Netherland

HIGHER ELECTRICAL STRENGTH RETENTION

HIGHER SHORT CIRCUIT RATING

BETTER ELECTRICAL, MECHANICAL & THERMAL PROPERTIES

EASY JOINTING & TERMINATION

■ Selection of Cables

Power Cables are generally selected considering the application. However following factors are important for selection of suitable cable construction required to transport electrical energy from one end to the other.

- 1) Maximum operating voltage.
- 2) Fault level.
- 3) Load to be carried.
- 4) Possible overloading duration & magnitude.
- 5) Route length and voltage drop.
- 6) Mode of installation considering installation environment such as ambient & ground temperature as well as chemical & physical properties of soil, Grouping factors, arrangement of Cables during installation
- 7) Flame retardant properties.

All sizes of POLYCAB XLPE cables are designed for standard operating conditions in India and abroad. The standards adopted are after duly considering the geographical / climactical conditions and general applications of power for utilities, distribution and generation purposes.

The cables are manufactured conforming to Indian & International cables specification for XLPE Insulated cables. Customer specific requirements can also be met.

■ Basic assumptions

The current rating given as per before mentioned following assumptions

- a) Maximum Conductor temperature : 90 °C
- b) Thermal resistivity of soil : 1.5k. m/w
- c) Ground temperature : 30 °C
- d) Ambient air temperature : 40 °C
- e) Depth of laying (measured to : 750 mm

Comparative Current Rating and short Circuits Rating for XLPE Cable Vis-a-Vis PVC Cables

■ COMPARATIVE CURRENT RATINGS OF 650/1100 VOLTS MULTICORE HEAVY DUTY PVC INSULATED CABLES & XLPE INSULATED CABLES.

(3. 3.5 & 4 Core Unarmoured / Armoured PVC Sheathed Cables with Aluminium Conductor.)

Nominal Size of Cable	3, 3.5 & 4 Core PVC Insulated & Sheathed Cables as per IS - 1554 (Part-1)			3, 3.5 & 4 Core XLPE Insulated & Sheathed Cables as per IS - 7098 (Part-1)		
	In Ground	In Air	Approx Voltage Drop	In Ground	In Air	Approx Voltage Drop
Sq. mm	Amp	Amp	mv / amp / mtr	Amp	Amp	Mv / amp / mtr
16	61	52	3.96	74	69	4.24
25	78	70	2.49	95	93	2.67
35	94	85	1.80	114	114	1.94
50	111	104	1.34	134	138	1.43
70	136	131	0.93	164	175	0.99
95	163	162	0.68	197	216	0.72
120	185	186	0.54	223	249	0.58
150	206	212	0.45	249	284	0.48
185	234	245	0.36	282	329	0.39
240	271	291	0.29	327	392	0.31
300	305	335	0.25	369	452	0.26
400	348	390	0.21	420	526	0.21

■ COMPARISON OF SHORT CIRCUIT RATING FOR 1 SECOND DURATION FOR

* PVC & XLPE Insulated Cables ** with Copper and Aluminium Conductors. (Current in kAmps)

Nominal Size	PVC Insulated		XLPE Insulated	
	Copper	Aluminium	Copper	Aluminium
1.5	0.173	-	0.21	-
2.5	0.29	-	0.36	-
4	0.46	0.30	0.57	0.38
6	0.69	0.46	0.86	0.57
10	1.15	0.76	1.43	0.95
16	1.84	1.22	2.29	1.51
25	2.88	1.90	3.58	2.36
35	4.03	2.66	5.01	3.31
50	5.75	3.80	7.16	4.73
70	8.05	5.32	10.02	6.62
95	10.93	7.22	13.59	8.98
120	13.80	9.12	17.17	11.34
150	17.25	11.40	21.47	14.18
185	21.27	14.06	26.47	17.48
240	27.60	18.24	34.34	22.68
300	34.50	22.80	42.93	28.35
400	46	30.40	57.24	37.80
500	57.50	38	71.55	47.25
630	72.45	47.88	90.15	59.54
800	92	60.80	114.48	75.60
1000	115	76	143.10	94.50

* PVC Type A Insulation as per IS-5831 84.

** PVC Cables as per IS-1554 (Part-1)

** XLPE Cables as per IS-7098 (Part-1)

1) Max. Conductor Temperature during
Operation PVC XLPE
 70°C 90°C

2) Max. Conductor Temperature During
Short circuit. 160° C 250° C

Formula relating Short Circuit Rating with duration

$$I_{sh} = \frac{K \cdot A}{\sqrt{t}}$$

A = Gross section area in Sq. mm

T = Duration in seconds

K = Constant

I_{sh} = Short circuit current, KA

■ APPROXIMATE CAPACITANCE (Microfarads / Km) 1.1 KV XLPE CABLES.

Nominal Area of Conductor	Single Core	Two Core	Three, Three & Half and Four Core
	Armoured	Armoured	Armoured
1.5	-	0.18	0.18
2.5	-	0.21	0.21
4	-	0.25	0.25
6	-	0.29	0.29
10	0.34	0.36	0.36
16	0.40	0.43	0.43
25	0.42	0.43	0.43
35	0.47	0.50	0.50
50	0.50	0.53	0.53
70	0.55	0.57	0.56
95	0.62	0.65	0.65
120	0.66	0.67	0.67
150	0.64	0.65	0.64
185	0.66	0.63	0.63
240	0.70	0.68	0.67
300	0.74	0.71	0.71
400	0.75	0.73	0.72
500	0.78	0.74	0.74
630	0.82	0.77	0.77
800	0.83	-	-
1000	0.87	-	-

■ APPROXIMATE REACTANCE AT 50 HZ (0hn/Km) 1.1 KV XLPE CABLES.

Nominal Area of Conductor	Single Core		Multi Core
	Unarmoured	Armoured	
1.5	0.154	-	0.105
2.5	0.143	-	0.0990
4	0.134	-	0.0933
6	0.125	-	0.0888
10	0.116	0.131	0.0842
16	0.110	0.124	0.0805
25	0.105	0.117	0.0808
35	0.101	0.112	0.0787
50	0.0937	0.108	0.0780
70	0.0910	0.100	0.0742
95	0.0879	0.099	0.0725
120	0.0850	0.0951	0.0713
150	0.0855	0.0936	0.0718
185	0.0839	0.0913	0.0720
240	0.0820	0.0887	0.0713
300	0.0801	0.0868	0.0703
400	0.0792	0.0861	0.0702
500	0.0780	0.0843	0.0700
630	0.0767	0.0829	0.0697
800	0.0762	0.0819	-
1000	0.0757	0.0820	-

■ CONDUCTOR TECHNICAL INFORMATION FOR SINGLE CORE AND MULTICORE CABLES CONFORMING TO IS-8130/1984 (STRANDED-CLASS-2) COPPER & ALUMINIUM CONDUCTORS.

Nominal Size of Conductor	Minimum no. of wires				Max D.C. Resistance at 20°C		A. C. Resistance at 90°C	
	Non Compacted		Compacted		Plain Copper	Aluminium	Plain Copper	Aluminium
	Round / Shaped							
Sq.mm	CU.	ALU.	CU.	ALU.	Ohm/Km	Ohm/Km	Ohm/Km	Ohm/Km
1.5*	3	3	-	-	12.10	18.1	15.40	23.2
2.5*	3	3	-	-	7.41	12.1	9.45	15.50
4*	7	3	-	-	4.61	7.41	5.88	9.50
6*	7	3	-	-	3.08	4.61	3.93	5.91
10*	7	7	6	-	1.83	3.08	2.33	3.95
16	7	7	6	6	1.15	1.91	1.47	2.44
25	7	7	6	6	0.727	1.20	0.93	1.54
35	7	7	6	6	0.524	0.868	0.668	1.11
50	19	19	6	6	0.387	0.641	0.494	0.82
70	19	19	12	12	0.268	0.443	0.342	0.568
95	19	19	15	15	0.193	0.32	0.247	0.410
120	37	37	18	15	0.153	0.253	0.196	0.325
150	37	37	18	15	0.124	0.206	0.159	0.264
185	37	37	30	30	0.0991	0.164	0.128	0.211
240	61	37	34	30	0.0754	0.125	0.0985	0.161
300	61	61	34	30	0.0601	0.100	0.0796	0.129
400	61	61	53	53	0.047	0.0778	0.0637	0.101
500	61	61	53	53	0.0366	0.0605	0.0515	0.0786
630	91	91	53	53	0.0283	0.0469	0.0421	0.0615
800	91	91	53	53	0.0221	0.0367	0.0354	0.0488
1000	91	91	53	53	0.0176	0.0291	0.0225	0.0372

* These sizes can be manufactured with solid conductor having single strand

POLYCAB PRECONDITIONS FOR CURRENT RATING

- The values given in the table are valid for on circuit in a three phase system under conditions specified. For grouping cables rating factor must be used.
- The current carrying capacities mentioned in POLYCAB technical data are intended as a guide, to assist operating engineers in selecting cables for safety and reliability.
- Basic assumption and condition of installation:
 - * Ambient ground Temperature: 30 °C
 - * Ambient air Temperature: 40 °C
 - * Depth of Cable Burial: 750 mm
 - * Thermal Resistivity of soil: 1.5 k.m/w
- Single Core Cables are installed as indicated in the table; spacing between cables in flat formation is as indicated.
- For 3 and 4 core cables, it is usual to assume the same current carrying capacity for 4 core cable as for 3 core cables. Our calculated values are based actually on 3 core cables. These values are suitable with enough accuracy also for 4 cables in most cases. Only for large 4 core cables in air the values are too conservative, due to the large cable surface and consequent high heat dissipation factor.
- To obtain the maximum current carrying capacity of a cable operating at different conditions from the standard, various rating factors are to be multiplied as follows:

$I_a = K I_s$ (in Amperes)

Where

I_a = Current Rating at actual Operating Conditions (amperes)

I_s = Current Rating at Standard Operating Conditions (amperes)

K = Rating factor as applicable

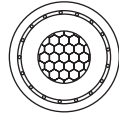


TABLE-I "POLYCAB" SINGLE CORE ALUMINIUM CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS				WEIGHT & DIMENSIONS															
Nominal Size of Conductor	Form of Conductor Circular	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Nominal Thickness of XLPE Insulation for Armoured Cable	Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable				Current Rating, *		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable Kgs./Km		Nominal Dimension of Aluminium Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable.	Approx. Weight of Cable Kgs./Km	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground		In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	-NA-	1.80	7.50	60	-	-	-	-	-	-	-	-	-	-	43	38	1000
4	Stranded	0.70	-NA-	1.80	8	65	-	-	-	-	-	-	-	-	-	-	43	38	1000
6	Solid	0.70	-NA-	1.80	8	70	-	-	-	-	-	-	-	-	-	-	55	50	1000
6	Stranded	0.70	-NA-	1.80	8.50	75	-	-	-	-	-	-	-	-	-	-	55	50	1000
10	Solid	0.70	-NA-	1.80	9	80	1	-	-	-	-	-	-	-	-	-	69	64	1000
10	Stranded	0.70	-NA-	1.80	9.50	90	1	-	-	-	-	-	-	-	-	-	69	64	1000
16	Stranded	0.70	-NA-	1.80	10	115	1	-	-	-	-	1.40	1.24	12.5	190	89	84	1000	
25	Stranded	0.90	-NA-	1.80	12	155	1.20	-	-	-	-	1.40	1.24	14	247	115	112	1000	
35	Stranded	0.90	-NA-	1.80	13	180	1.20	-	-	-	-	1.40	1.24	15	290	137	137	1000	
50	Stranded	1	-NA-	1.80	14	240	1.30	-	-	-	-	1.40	1.24	16.5	342	161	165	1000	
70	Stranded	1.10	-NA-	1.80	15.5	310	1.40	-	-	-	-	1.40	1.24	18.5	428	198	209	1000	
95	Stranded	1.10	-NA-	1.80	17.50	385	1.40	4 x 0.80	1.40	18.60	494.00	1.60	1.40	20.20	560	243	264	1000	
120	Stranded	1.20	-NA-	1.80	19.5	470	1.50	4 x 0.80	1.40	20.40	589.00	1.60	1.40	22.50	665	276	308	1000	
150	Stranded	1.40	-NA-	2	21.50	600	1.70	4 x 0.80	1.40	22.5	694.00	1.60	1.40	24.0	779	308	350	1000	
185	Stranded	1.60	-NA-	2	23.50	710	1.90	4 x 0.80	1.40	24.5	827.00	1.60	1.40	26.50	921	349	406	1000	
240	Stranded	1.70	-NA-	2	26	900	2	4 x 0.80	1.40	26.60	1026	1.60	1.40	29	1121	404	480	1000	
300	Stranded	1.80	-NA-	2	28.50	1158	2.10	4 x 0.80	1.56	29.60	1235	1.60	1.56	31.50	1349	454	551	1000	
400	Stranded	2	-NA-	2.20	31.5	1385	2.40	4 x 0.80	1.56	33.00	1548.5	2	1.56	35.50	1739	518	647	500	
500	Stranded	2.20	-NA-	2.20	35.5	1650	2.60	4 x 0.80	1.56	36.70	1909.5	2	1.56	39.50	2128	588	751	500	
630	Stranded	2.40	-NA-	2.20	39.5	2100	2.80	4 x 0.80	1.72	40.50	2413	2	1.72	43	2660	663	868	500	
800	Stranded	2.60	-NA-	2.40	44.50	2730	3.10	4 x 0.80	1.72	46.00	2992.5	2	1.88	47.90	3296.5	740	992	500	
1000	Stranded	2.80	-NA-	2.60	48.50	3350	3.30	4 x 0.80	1.88	50.00	3667	2.50	2.04	54.37	4142	812	1117	500	

The above data is approximate and subject to manufacturing tolerance.
* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

Weight, Dimension Data & Current Carrying Capacity of Cables

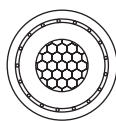


TABLE-2 “POLYCAB” SINGLE CORE COPPER CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Nominal Thickness of XLPE Insulation for Armoured Cable	Formed Wire / Strip Armoured Cable				Round Wire Armoured Cable				Current Rating, *		*Normal Delivery Length	
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable		Nominal Dimension of Aluminium Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air		
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.	
4	Solid	0.70	-NA-	1.80	7.50	85.5	-	-	-	-	-	-	-	-	-	54	48	1000	
4	Stranded	0.70	-NA-	1.80	8	88	-	-	-	-	-	-	-	-	-	54	48	1000	
6	Solid	0.70	-NA-	1.80	8	109	-	-	-	-	-	-	-	-	-	67	61	1000	
6	Stranded	0.70	-NA-	1.80	8.50	114	-	-	-	-	-	-	-	-	-	67	61	1000	
10	Stranded	0.70	-NA-	1.80	9.50	152	1	-	-	-	-	-	1.40	1.24	12	219	90	83	1000
16	Stranded	0.70	-NA-	1.80	10	209	1	-	-	-	-	-	1.40	1.24	13	281	115	108	1000
25	Stranded	0.90	-NA-	1.80	12	309	1.20	-	-	-	-	-	1.40	1.24	14	390	148	144	1000
35	Stranded	0.90	-NA-	1.80	13	399	1.20	-	-	-	-	-	1.40	1.24	16	485	177	176	1000
50	Stranded	1	-NA-	1.80	14	513	1.30	-	-	-	-	-	1.40	1.24	17	608	208	212	1000
70	Stranded	1.10	-NA-	1.80	16	712	1.40	-	-	-	-	-	1.40	1.24	19	817	255	269	1000
95	Stranded	1.10	-NA-	1.80	17.50	940	1.40	4 x 0.80	1.40	18.60	1036	1.60	1.40	22	1102	312	340	1000	
120	Stranded	1.20	-NA-	1.80	19	1168	1.50	4 x 0.80	1.40	20.40	1264	1.60	1.40	23.50	1339	355	396	1000	
150	Stranded	1.40	-NA-	2	21.50	1444	1.70	4 x 0.80	1.40	22.20	1530	1.60	1.40	24.50	1615	396	450	1000	
185	Stranded	1.60	-NA-	2	23.50	1786	1.90	4 x 0.80	1.40	24.40	1890	1.60	1.40	26.50	1976	447	519	1000	
240	Stranded	1.70	-NA-	2	26	2299	2	4 x 0.80	1.40	26.60	2404	1.60	1.40	29	2508	515	613	1000	
300	Stranded	1.80	-NA-	2	28.50	2840.5	2.10	4 x 0.80	1.56	29.60	2974	1.60	1.56	31.50	3078	576	700	500	
400	Stranded	2	-NA-	2.20	33	3629	2.40	4 x 0.80	1.56	33.20	3762	2	1.56	36.00	3962	651	813	500	
500	Stranded	2.20	-NA-	2.20	36	4598	2.60	4 x 0.80	1.56	36.70	4770	2	1.56	39.50	4969	727	930	500	
630	Stranded	2.40	-NA-	2.20	40	5880	2.80	4 x 0.80	1.72	41.20	6070	2	1.72	43	6318	806	1056	500	
800	Stranded	2.60	-NA-	2.40	43.70	7486	3.10	4 x 0.80	1.72	45.10	7676	2	1.88	48.5	7990	877	1179	500	
1000	Stranded	2.80	-NA-	2.60	49.20	9358	3.30	4 x 0.80	1.88	50.60	9567	2.50	2.04	54	10051	935	1288	500	

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is ±5%. Length more than normal as per customer request.



TABLE-3 “POLYCAB” TWO CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Nominal Thickness of XLPE Insulation For U/A	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable				Round Wire Armoured Cable				Current Rating.*		*Normal Delivery Length
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of Aluminium Round Wire	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	12.50	140	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.50	375	42	38	1000
4	Stranded	0.70	0.30	1.80	13	150	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.00	403	42	38	1000
6	Solid	0.70	0.30	1.80	13.50	170	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.50	437	55	50	1000
6	Stranded	0.70	0.30	1.80	14	180	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16.50	465	55	50	1000
10	Solid	0.70	0.30	1.80	15	205	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	503	68	64	1000
10	Stranded	0.70	0.30	1.80	16	225	-NA-	-NA-	-NA-	-NA-	1.40	1.24	18	551	68	64	1000
16	Stranded	0.70	0.30	1.80	14	225	-NA-	-NA-	-NA-	-NA-	1.40	1.40	17	480.16	89	83	1000
25	Stranded	0.90	0.30	2	17	330	4 x 0.80	1.40	18.50	509.13	1.60	1.40	20	671.84	114	109	1000
35	Stranded	0.90	0.30	2	19	410	4 x 0.80	1.40	20	605.51	1.60	1.40	22	775.55	136	133	1000
50	Stranded	1	0.30	2	21	510	4 x 0.80	1.40	22.50	753.28	1.60	1.40	24	937.97	161	162	1000
70	Stranded	1.10	0.30	2	23	675	4 x 0.80	1.56	22.50	989	1.60	1.56	27	1186.85	197	204	1000
95	Stranded	1.10	0.40	2.20	26.50	893	4 x 0.80	1.56	28	1204.30	2	1.56	28.68	1572.78	235	251	1000
120	Stranded	1.20	0.40	2.20	28.50	1050	4 x 0.80	1.56	30.50	1408.20	2	1.56	33	1949.49	266	287	500
150	Stranded	1.40	0.40	2.20	32	1215	4 x 0.80	1.72	31.79	1690.20	2	1.72	36	2182.96	296	328	500
185	Stranded	1.60	0.50	2.40	35.50	1510	4 x 0.80	1.72	34.95	2004.00	2	1.88	37.70	2597.60	335	379	500
240	Stranded	1.70	0.50	2.60	39.50	1900	4 x 0.80	1.88	38.69	2480.00	2.50	2.04	45	3418.52	385	448	500
300	Stranded	1.80	0.60	2.80	43.50	2360	4 x 0.80	2.04	42.53	2964.00	2.50	2.20	46.22	4019.07	432	513	500
400	Stranded	2	0.60	3	49	3100	4 x 0.80	2.36	48.24	3676.00	2.50	2.36	51.61	4854.00	487	593	500
500	Stranded	2.20	0.70	3.40	55.50	4000	4 x 0.80	2.52	56.50	4599.00	3.15	2.68	61.50	6517.00	548	683	500
630	Stranded	2.40	0.70	3.60	61.50	4997	4 x 0.80	2.68	62.50	5662.00	3.15	2.84	67.50	7790.00	612	784	500

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is ±5%. Length more than normal as per customer request.

Weight, Dimension Data & Current Carrying Capacity of Cables



TABLE-4 "POLYCAB" TWO CORE COPPER CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable				Current Rating, *		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground		In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	12.50	165	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.00	408	54	48	1000
4	Stranded	0.70	0.30	1.80	13	175	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.50	427	54	48	1000
6	Solid	0.70	0.30	1.80	13.50	210	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.00	484	67	61	1000
6	Stranded	0.70	0.30	1.80	14	225	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16.00	522	67	61	1000
10	Stranded	0.70	0.30	1.80	16	300	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17.50	665	89	83	1000
16	Stranded	0.70	0.30	1.80	14	422	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.40	17	696.50	115	108	1000
25	Stranded	0.90	0.30	2	17	636	4 x 0.80	1.40	18.50	804.40	1.60	1.40	1.40	20	1001.70	147	140	1000
35	Stranded	0.90	0.30	2	19	817	4 x 0.80	1.40	20	1019.70	1.60	1.40	1.40	22	1224.20	176	172	1000
50	Stranded	1	0.30	2	21	1054	4 x 0.80	1.40	22.50	1311.00	1.60	1.40	1.40	24	1520.00	208	208	1000
70	Stranded	1.10	0.30	2	23	1453	4 x 0.80	1.56	25.50	1757.00	1.60	1.56	1.56	27	2004.00	253	262	1000
95	Stranded	1.10	0.40	2.20	26.50	1966	4 x 0.80	1.56	28	2289.00	2	1.56	30.50	2736.00	302	322	500	
120	Stranded	1.20	0.40	2.20	28.50	2413	4 x 0.80	1.56	30.50	2755.00	2	1.56	33	3230.00	340	368	500	
150	Stranded	1.40	0.40	2.20	32	2935	4 x 0.80	1.72	31.80	3353.00	2	1.72	36	3876.00	379	419	500	
185	Stranded	1.60	0.50	2.40	35.50	3676	4 x 0.80	1.72	37	4094.00	2	1.88	40	4731.00	425	482	500	
240	Stranded	1.70	0.50	2.60	39.50	4750	4 x 0.80	1.88	38.70	5225.00	2.50	2.04	42.40	6203.00	486	566	500	
300	Stranded	1.80	0.60	2.80	43.50	5918	4 x 0.80	2.04	42.50	6412.00	2.50	2.20	46.20	7514.00	541	644	500	
400	Stranded	2	0.60	3	49	7495	4 x 0.80	2.36	48.20	8075.00	2.50	2.36	51.60	9262.00	602	734	500	

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.



WEIGHT & DIMENSIONS

TABLE-5 "POLYCAB" THREE CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable			Current Rating.*		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable		In Ground	In Air
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13	140	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15	460	35	32	1000
4	Stranded	0.70	0.30	1.80	13.50	160	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	399	35	32	1000
6	Solid	0.70	0.30	1.80	14.50	170	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	530	46	42	1000
6	Stranded	0.70	0.30	1.80	15	190	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17	470	46	42	1000
10	Solid	0.70	0.30	1.80	15.50	220	-NA-	-NA-	-NA-	-NA-	1.40	1.24	18	640	57	54	1000
10	Stranded	0.70	0.30	1.80	17	230	-NA-	-NA-	-NA-	-NA-	1.40	1.24	18.50	551	57	54	1000
16	Stranded	0.70	0.30	1.80	16.20	304	4 x 0.80	1.24	16.80	487.60	1.60	1.40	19	648.40	74	69	1000
25	Stranded	0.90	0.30	2	19.50	446	4 x 0.80	1.40	20.10	670.70	1.60	1.40	21.70	855.00	95	93	1000
35	Stranded	0.90	0.30	2	21.50	551	4 x 0.80	1.40	22	798.00	1.60	1.40	23.60	997.00	114	114	1000
50	Stranded	1	0.30	2	24.50	693	4 x 0.80	1.40	24.80	960.00	1.60	1.56	26.80	1235.00	134	138	1000
70	Stranded	1.10	0.40	2.20	28	950	4 x 0.80	1.56	28.50	1282	2	1.56	30.90	1729.00	164	175	500
95	Stranded	1.10	0.40	2.20	30.80	1206	4 x 0.80	1.56	31.30	1577	2	1.56	33.70	2077.00	197	216	500
120	Stranded	1.20	0.40	2.20	33.80	1463	4 x 0.80	1.56	34.30	1871	2	1.72	37	2422.00	223	249	500
150	Stranded	1.40	0.50	2.40	37.90	1814	4 x 0.80	1.72	38.30	2100	2	1.88	41.10	2888.00	249	284	500
185	Stranded	1.60	0.50	2.60	42	2242	4 x 0.80	1.88	42.30	2500	2.50	2.04	46	3733.00	282	329	500
240	Stranded	1.70	0.60	2.80	46.90	2869	4 x 0.80	2.04	47.20	3382	2.50	2.20	50.90	4531.00	327	392	500
300	Stranded	1.80	0.60	3	51.50	3505	4 x 0.80	2.20	51.80	4066	2.50	2.36	55.45	5339.00	369	452	500
400	Stranded	2	0.70	3.20	58.60	4427	4 x 0.80	2.52	58.50	5101	3.15	2.68	64	7115.00	420	526	500
500	Stranded	2.20	0.70	3.60	66	5681	4 x 0.80	2.68	65	6365	3.15	2.84	73	8597.00	478	612	250
630	Stranded	2.40	0.70	3.80	72	7125	4 x 0.80	2.84	73	7894	4	3	78	11295	542	712	250

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

Weight, Dimension Data & Current Carrying Capacity of Cables



TABLE-6 "POLYCAB" THREE CORE COPPER CONDUCTOR, XLPE INSULATED, UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable			Current Rating, *		*Normal Delivery Length			
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable		In Ground	In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.	
4	Solid	0.70	0.30	1.80	13.00	210	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15	530	45	41	1000
4	Stranded	0.70	0.30	1.80	13.50	232	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	460	45	41	1000
6	Solid	0.70	0.30	1.80	14.00	280	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	640	56	52	1000
6	Stranded	0.70	0.30	1.80	15.00	299	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17	551	56	52	1000
10	Stranded	0.70	0.30	1.80	16.50	415	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	19	722	74	70	1000
16	Stranded	0.70	0.30	1.80	16.20	425	4 x 0.80	1.24	16.80	772.30	1.60	1.60	1.40	18.80	921	95	89	1000
25	Stranded	0.90	0.30	2	19.50	874	4 x 0.80	1.40	20.10	1102	1.60	1.60	1.40	21.70	1282	122	119	1000
35	Stranded	0.90	0.30	2	21.50	1150	4 x 0.80	1.40	22	1396	1.60	1.60	1.40	23.60	1596	146	147	1000
50	Stranded	1	0.30	2	24.50	1501	4 x 0.80	1.40	24.80	1767	1.60	1.60	1.56	26.80	2042	173	179	1000
70	Stranded	1.10	0.40	2.20	28.00	2118	4 x 0.80	1.56	28.50	2441	2	2	1.56	30.90	2888	212	226	500
95	Stranded	1.10	0.40	2.20	30.80	2821	4 x 0.80	1.56	31.30	3182	2	2	1.56	33.70	3686	254	279	500
120	Stranded	1.20	0.40	2.20	33.80	3496	4 x 0.80	1.56	34.30	3895	2	2	1.72	37	4455	287	320	500
150	Stranded	1.40	0.50	2.40	37.90	4322	4 x 0.80	1.72	38.30	4759	2	2	1.88	41.10	5396	321	365	500
185	Stranded	1.60	0.50	2.60	42	5377	4 x 0.80	1.88	42.30	5852	2.50	2.50	2.04	46	6868	362	422	500
240	Stranded	1.70	0.60	2.80	46.90	6992	4 x 0.80	2.04	47.20	7505	2.50	2.50	2.20	50.90	8654	418	500	500
300	Stranded	1.80	0.60	3	51.50	8683	4 x 0.80	2.20	51.80	9243	2.50	2.50	2.36	55.50	10526	469	574	500
400	Stranded	2	0.70	3.20	58.60	11029	4 x 0.80	2.52	58.50	11704	3.15	3.15	2.68	64	13718	528	662	250

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is ±5%. Length more than normal as per customer request.

TABLE-7 “POLYCAB” THREE AND HALF CORE ALUMINIUM CONDUCTOR, XLPE INSULATED
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1



WEIGHT & DIMENSIONS

650/1100 VOLTS

Nominal Size of Conductor	Form of Conductor	Nominal Thickness of XLPE Insulation Main / Neutral	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable				Current Rating.*		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground		In Air	
Sq.mm		mm mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	mm	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
25/16	Stranded	0.90 0.70	0.30	2	21.30	525	4 x 0.80	1.40	21.90	733	1.60	1.40	23.60	969	95	93	1000	
35/16	Stranded	0.90 0.70	0.30	2	23.60	625	4 x 0.80	1.40	24.20	886	1.60	1.40	25.80	1139	114	114	1000	
50/25	Stranded	1 0.90	0.30	2	26.80	800	4 x 0.80	1.40	27.40	1113	1.60	1.56	29.50	1387	134	138	1000	
70/35	Stranded	1.10 0.90	0.40	2.20	31	1100	4 x 0.80	1.56	31.50	1451	2	1.56	34	1938	164	175	500	
95/50	Stranded	1.10 1	0.40	2.20	34.30	1400	4 x 0.80	1.56	34.80	1796	2	1.56	37.20	2356	197	216	500	
120/70	Stranded	1.20 1.10	0.40	2.20	37.50	1650	4 x 0.80	1.72	38.50	2199	2	1.72	41	2800	223	249	500	
150/70	Stranded	1.40 1.10	0.50	2.40	41	2000	4 x 0.80	1.72	42	2579	2	1.88	45	3296	249	284	500	
185/95	Stranded	1.60 1.10	0.50	2.60	46.50	2550	4 x 0.80	1.88	47.20	3156	2.50	2.04	50	4313	282	329	500	
240/120	Stranded	1.70 1.20	0.60	2.80	52.50	3200	4 x 0.80	2.04	52.70	3913	2.50	2.20	56	5196	327	392	500	
300/150	Stranded	1.80 1.40	0.60	3	56	4000	4 x 0.80	2.20	57	4693	2.50	2.36	61	6108	369	452	500	
400/185	Stranded	2 1.60	0.70	3.40	64	5177	4 x 0.80	2.52	65	5890	3.15	2.68	70	8151	420	526	500	
500/240	Stranded	2.20 1.70	0.70	3.60	72.50	6500	4 x 0.80	2.68	73.50	7400	3.15	2.84	77	9880	478	612	250	

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is ±5%. Length more than normal as per customer request.



TABLE-8 “POLYCAB” THREE AND HALF CORE COPPER CONDUCTOR, XLPE INSULATED
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

WEIGHT & DIMENSIONS																		
Nominal Size of Conductor	Form of Conductor	Nominal Thickness of XLPE Insulation Main / Neutral	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable				Current Rating, *		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground		In Air	
Sq.mm		mm mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
25/16	Stranded	0.90 0.70	0.30	2	21.30	1035	4 x 0.80	1.40	21.90	1272	1.60	1.40	23.60	1491	122	119	1000	
35/16	Stranded	0.90 0.70	0.30	2	23.60	1311	4 x 0.80	1.40	24.20	1586	1.60	1.40	25.80	1824	146	147	1000	
50/25	Stranded	1 0.90	0.30	2	26.80	1748	4 x 0.80	1.40	27.40	2061	1.60	1.56	29	2337	173	179	1000	
70/35	Stranded	1.10 0.90	0.40	2.20	31	2460	4 x 0.80	1.56	31.50	2831	2	1.56	33.90	3296	212	226	500	
95/50	Stranded	1.10 1	0.40	2.20	34.30	3287	4 x 0.80	1.56	34.80	3686	2	1.56	37.20	4237	254	279	500	
120/70	Stranded	1.20 1.10	0.40	2.20	37.60	4142	4 x 0.80	1.72	38.50	4617	2	1.72	41	5225	287	320	500	
150/70	Stranded	1.40 1.10	0.50	2.40	42.30	4987	4 x 0.80	1.72	42.70	5481	2	1.88	45	6194	321	365	500	
185/95	Stranded	1.60 1.10	0.50	2.60	46.80	6279	4 x 0.80	1.88	47.20	6830	2.50	2.04	50	7989	362	422	500	
240/120	Stranded	1.70 1.20	0.60	2.80	52.40	8122	4 x 0.80	2.04	52.70	8711	2.50	2.20	56	10003	418	500	500	
300/150	Stranded	1.80 1.40	0.60	3	57	10079	4 x 0.80	2.20	57.90	10716	2.50	2.36	61	12131	469	574	500	
400/185	Stranded	2 1.60	0.70	3.40	65	12834.5	4 x 0.80	2.52	65.50	13556	3.15	2.68	70	15817	528	662	250	

The above data is approximate and subject to manufacturing tolerance.
* Delivery Length tolerance is ±5%. Length more than normal as per customer request.



TABLE-9 “POLYCAB” FOUR CORE ALUMINIUM CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable			Current Rating *		*Normal Delivery Length
		Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm		mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13.50	160	-NA-	-NA-	15.30	413	35	32	1000
4	Stranded	0.70	0.30	1.80	14.20	180	-NA-	-NA-	16	435	35	32	1000
6	Solid	0.70	0.30	1.80	14.70	200	-NA-	-NA-	16.50	473	46	42	1000
6	Stranded	0.70	0.30	1.80	15.50	215	-NA-	-NA-	17.30	506	46	42	1000
10	Solid	0.70	0.30	1.80	16.60	250	-NA-	-NA-	18.60	592	57	54	1000
10	Stranded	0.70	0.30	1.80	17.50	260	-NA-	-NA-	19.80	633	57	54	1000
16	Stranded	0.70	0.30	1.80	17.80	350	4 x 0.80	1.40	21	795	74	69	1000
25	Stranded	0.90	0.30	2	21	550	4 x 0.80	1.40	25	1045	95	93	500
35	Stranded	0.90	0.30	2	23.50	680	4 x 0.80	1.40	26.50	1244	114	114	500
50	Stranded	1	0.30	2	26	875	4 x 0.80	1.56	28	1235	134	138	500
70	Stranded	1.10	0.40	2.20	30.50	1200	4 x 0.80	1.56	34	2137	164	175	500
95	Stranded	1.10	0.40	2.20	33.50	1530	4 x 0.80	1.56	38	2622	197	216	500
120	Stranded	1.20	0.50	2.40	37.50	1850	4 x 0.80	1.72	42	3087	223	249	500
150	Stranded	1.40	0.50	2.60	42	2280	4 x 0.80	1.88	47	3980	249	284	500
185	Stranded	1.60	0.50	2.80	46.50	2800	4 x 0.80	2.04	52	4721	282	329	500
240	Stranded	1.70	0.60	3	52.50	3700	4 x 0.80	2.20	57.50	5709	327	392	500
300	Stranded	1.80	0.70	3.20	58	4600	4 x 0.80	2.36	64.50	7372	369	452	500
400	Stranded	2	0.70	3.60	65.50	6000	4 x 0.80	2.68	71.50	8985	420	526	500

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

Weight, Dimension Data & Current Carrying Capacity of Cables



TABLE-10 "POLYCAB" FOUR CORE COPPER CONDUCTOR, XLPE INSULATED,
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

650/1100 VOLTS

WEIGHT & DIMENSIONS

Nominal Size of Conductor	Form of Conductor Circular Shaped	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable			Round Wire Armoured Cable				Current Rating.*		*Normal Delivery Length		
				Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground		In Air	
Sq.mm	mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
4	Solid	0.70	0.30	1.80	13.50	260	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.30	503	45	41	1000
4	Stranded	0.70	0.30	1.80	14.20	280	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16	533	45	41	1000
6	Solid	0.70	0.30	1.80	14.70	350	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16.50	618	56	52	1000
6	Stranded	0.70	0.30	1.80	15.50	365	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17.30	646	56	52	1000
10	Stranded	0.70	0.30	1.80	17.80	510	-NA-	-NA-	-NA-	-NA-	-NA-	1.40	1.40	19.80	870	74	70	1000
16	Stranded	0.70	0.30	1.80	17.50	741	4 x 0.80	1.40	20	969	1.60	1.40	21	1159	95	89	1000	
25	Stranded	0.90	0.30	2	21	1140	4 x 0.80	1.40	23	1406	1.60	1.40	25	1615	122	119	500	
35	Stranded	0.90	0.30	2	23.50	1491	4 x 0.80	1.40	25	1786	1.60	1.40	26.50	2033	146	147	500	
50	Stranded	1	0.30	2	26	1957	4 x 0.80	1.56	28	2308	1.60	1.56	29.50	2593	173	179	500	
70	Stranded	1.10	0.40	2.20	30.50	2774	4 x 0.80	1.56	32	3154	2	1.56	34	3686	212	226	500	
95	Stranded	1.10	0.40	2.20	33.50	3714	4 x 0.80	1.56	35	4161	2	1.72	38	4769	254	279	500	
120	Stranded	1.20	0.50	2.40	37.50	4645	4 x 0.80	1.72	39	5101	2	1.88	42	5795	287	320	500	
150	Stranded	1.40	0.50	2.60	42	5719	4 x 0.80	1.88	43.50	6232	2.50	2.04	47	7324	321	365	500	
185	Stranded	1.60	0.50	2.80	46.50	7125	4 x 0.80	2.04	48	7676	2.50	2.20	52	8901	362	422	500	
240	Stranded	1.70	0.60	3	52.50	9253	4 x 0.80	2.20	54	9880	2.50	2.36	57.50	11210	418	500	500	
300	Stranded	1.80	0.70	3.20	58	11524	4 x 0.80	2.36	59.50	12198	3.15	2.52	64.50	14279	469	574	500	

The above data is approximate and subject to manufacturing tolerance.
* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

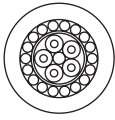


TABLE-I "POLYCAB" 650/1100 VOLTS MULTICORE CONTROL CABLE WITH SOLID COPPER CONDUCTOR OF SIZE 1.5 SQ.MM XLPE INSULATED
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

WEIGHT & DIMENSIONS

SOLID & STRANDED \$

Number of Cores	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable				Round Wire Armoured Cable				Current Rating, *		*Normal Delivery Length	
			Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Wire	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air		
Sq.mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	mm	mm	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
2	0.70	0.30	1.80	10	140	-NA-	-NA-	-NA-	-NA-	1.40	1.24	11.90	288	31	27	1000	
3	0.70	0.30	1.80	10.50	160	-NA-	-NA-	-NA-	-NA-	1.40	1.24	12.40	302	26	23	1000	
4	0.70	0.30	1.80	11.50	171	-NA-	-NA-	-NA-	-NA-	1.40	1.24	13.10	349	26	23	1000	
5	0.70	0.30	1.80	12.10	195	-NA-	-NA-	-NA-	-NA-	1.40	1.24	13.90	385	26	23	1000	
6	0.70	0.30	1.80	12.90	222	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.70	432	23	20	1000	
7	0.70	0.30	1.80	12.90	239	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.70	450	20	18	1000	
8	0.70	0.30	1.80	14	275	-NA-	-NA-	-NA-	-NA-	1.40	1.24	16.50	494	17	15	1000	
9	0.70	0.30	1.80	15	308	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17.50	542	17	15	1000	
10	0.70	0.30	1.80	15.70	327	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17.50	594	17	15	1000	
12	0.70	0.30	1.80	16.10	365	-NA-	-NA-	-NA-	-NA-	1.40	1.24	18	646	16	14	1000	
14	0.70	0.30	1.80	16.80	413	-NA-	-NA-	-NA-	-NA-	1.40	1.40	18.90	709	16	14	1000	
16	0.70	0.30	1.80	17.70	460	4 x 0.80	1.40	18.50	651	1.60	1.40	20.10	807	14	12	1000	
19	0.70	0.30	1.80	18.50	513	4 x 0.80	1.40	19.30	736	1.60	1.40	20.90	900	14	12	1000	
21	0.70	0.30	2	19.80	560	4 x 0.80	1.40	20.20	788	1.60	1.40	21.80	960	12	11	500	
24	0.70	0.30	2	21.70	627	4 x 0.80	1.40	22.10	874	1.60	1.40	23.70	1094	12	11	500	
27	0.70	0.30	2	22.10	684	4 x 0.80	1.40	22.50	950	1.60	1.40	24.10	1152	11	9	500	
30	0.70	0.30	2	22.80	741	4 x 0.80	1.40	23.20	1016	1.60	1.40	24.90	1229	11	9	500	
33	0.70	0.30	2	23.70	807	4 x 0.80	1.40	24.10	1102	1.60	1.40	25.70	1322	11	9	500	
37	0.70	0.30	2	24.50	874	4 x 0.80	1.40	24.90	1168	1.60	1.40	26.50	1415	11	9	500	
44	0.70	0.30	2	27.30	1026	4 x 0.80	1.40	27.70	1358	1.60	1.56	29.70	1662	9	8	500	
52	0.70	0.30	2	28.40	1178	4 x 0.80	1.56	29.20	1548	1.60	1.56	30.90	1833	9	8	500	
61	0.70	0.40	2.20	30.70	1387	4 x 0.80	1.56	31.10	1757	2	1.56	33.50	2251	9	8	500	

The above data is approximate and subject to manufacturing tolerance.
* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

Weight, Dimension Data & Current Carrying Capacity of Cables

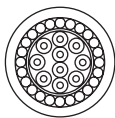


TABLE-12 "POLYCAB" 650/1100 VOLTS MULTICORE CONTROL WITH SOLID COPPER CONDUCTOR OF SIZE 2.5 SQ.MM XLPE INSULATED
UNARMoured & ARMoured CABLE CONFORMING TO IS 7098 PART-1

WEIGHT & DIMENSIONS

SOLID & STRANDED *

Number of Cores	Nominal Thickness of XLPE Insulation	Minimum Thickness of PVC Inner Sheath	Unarmoured Cable			Formed Wire / Strip Armoured Cable				Round Wire Armoured Cable				Current Rating.*		*Normal Delivery Length
			Nominal Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Flat Strip	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	Nominal Dimension of GI Round Wire	Minimum Thickness of PVC Outer Sheath	Approx. Overall Diameter of Cable	Approx. Weight of Cable	In Ground	In Air	
Sq.mm	mm	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	mm	mm	mm	Kgs./Km	Amps.	Amps.	Mtrs.
2	0.70	0.30	1.80	10.90	173	-NA-	-NA-	-NA-	-NA-	1.40	1.24	12.70	342	41	36	1000
3	0.70	0.30	1.80	11.40	202	-NA-	-NA-	-NA-	-NA-	1.40	1.24	13.20	360	34	30	1000
4	0.70	0.30	1.80	12.20	218	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14	406	34	30	1000
5	0.70	0.30	1.80	13.10	254	-NA-	-NA-	-NA-	-NA-	1.40	1.24	14.90	464	34	30	1000
6	0.70	0.30	1.80	14	291	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.90	522	31	27	1000
7	0.70	0.30	1.80	14	313	-NA-	-NA-	-NA-	-NA-	1.40	1.24	15.90	549	27	23	1000
8	0.70	0.30	1.80	16	342	-NA-	-NA-	-NA-	-NA-	1.40	1.24	17	608	23	20	1000
9	0.70	0.30	1.80	16.50	385	-NA-	-NA-	-NA-	-NA-	1.40	1.40	18.50	684	23	20	1000
10	0.70	0.30	1.80	17.20	427	4 x 0.80	1.24	17.80	624	1.60	1.40	19.60	789	23	20	1000
12	0.70	0.30	1.80	17.70	484	4 x 0.80	1.40	18.50	694	1.60	1.40	20.10	865	20	18	1000
14	0.70	0.30	1.80	18.50	551	4 x 0.80	1.40	19.30	780	1.60	1.40	20.90	944	20	18	1000
16	0.70	0.30	2	19.80	636	4 x 0.80	1.40	20.20	867	1.60	1.40	21.90	1023	18	16	1000
19	0.70	0.30	2	20.80	722	4 x 0.80	1.40	21.20	960	1.60	1.40	22.80	1147	18	16	1000
21	0.70	0.30	2	21.80	769	4 x 0.80	1.40	22.20	1016	1.60	1.40	23.90	1243	16	14	500
24	0.70	0.30	2	24	864	4 x 0.80	1.40	24.40	1159	1.60	1.40	26	1387	16	14	500
27	0.70	0.30	2	24.50	950	4 x 0.80	1.40	24.90	1235	1.60	1.40	26.50	1482	14	13	500
30	0.70	0.30	2	25.30	1035	4 x 0.80	1.40	25.70	1349	1.60	1.40	27.30	1586	14	13	500
33	0.70	0.30	2	26.20	1130	4 x 0.80	1.40	26.60	1437	1.60	1.56	28.60	1729	14	13	500
37	0.70	0.30	2	27.20	1235	4 x 0.80	1.40	27.60	1567	1.60	1.56	29.60	1852	14	13	500
44	0.70	0.40	2.20	30.90	1501	4 x 0.80	1.56	31.30	1862	2	1.56	33.70	2356	12	11	500
52	0.70	0.40	2.20	32.20	1719	4 x 0.80	1.56	32.60	2109	2	1.56	35	2631	12	11	500
61	0.70	0.40	2.20	34.10	1976	4 x 0.80	1.56	34.50	2375	2	1.56	36.90	2926	12	11	500

The above data is approximate and subject to manufacturing tolerance.

* Delivery Length tolerance is $\pm 5\%$. Length more than normal as per customer request.

Table 1 Rating factors for variation in ambient air temperature for cables in free air

Maximum conductor temperature	Ambient air temperature °C							
°C	15	30	35	40	45	50	55	60
90	1.14	1.10	1.05	1	0.96	0.89	0.87	0.77

Table 2 Rating factors for variation in ground temperature for direct buried cables

Maximum conductor temperature	Ground temperature °C							
°C	15	20	25	30	35	40	45	50
90	1.12	1.08	1.04	1	0.96	0.91	0.87	0.82

Table 3 Rating factors for variation in ground temperature for cables in ducts

Maximum conductor temperature	Ground temperature °C							
°C	15	20	25	30	35	40	45	50
90	1.12	1.08	1.04	1	0.96	0.91	0.87	0.82

Table 4 Rating factors for depths of laying for direct buried cables

Depth of laying mm	Up to 25 mm ²		Above 25 mm ² Up to 300 mm ²		Above 300 mm ²	
	Single-core	Multi-core	Single-core	Multi-core	Single-core	Multi-core
750	1	1	1	1	1	1
900	0.98	0.98	0.98	0.98	0.98	0.98
1050	0.97	0.98	0.96	0.97	0.96	0.96
1200	0.96	0.97	0.95	0.95	0.94	0.95
1500	0.94	0.95	0.93	0.93	0.92	0.93
1800	0.93	0.93	0.91	0.92	0.9	0.91
2000	0.92	0.93	0.90	0.91	0.89	0.90
2500	0.90	0.92	0.89	0.89	0.87	0.88
3000	0.90	0.90	0.87	0.88	0.86	0.87

■ **Table 5 Rating factors for depths of laying for cables in ducts**

Depth of laying mm	Up to 25 mm ²		Above 25 mm ² Up to 300 mm ²		Above 300 mm ²	
	Single-core	Multi-core	Single-core	Multi-core	Single-core	Multi-core
750	1	1	1	1	1	1
900	0.98	0.98	0.98	0.99	0.98	0.98
1050	0.97	0.98	0.96	0.97	0.96	0.97
1200	0.96	0.97	0.95	0.97	0.94	0.96
1500	0.94	0.96	0.93	0.95	0.92	0.94
1800	0.93	0.95	0.91	0.94	0.90	0.93
2000	0.92	0.94	0.90	0.93	0.89	0.92
2500	0.90	0.93	0.88	0.92	0.87	0.91
3000	0.89	0.92	0.87	0.91	0.86	0.90

■ **Table 6 Rating factors for variations in soil thermal resistivities for two single-core cables laid direct in ground**

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.16	1.09	1	0.91	0.81	0.75
2.50	1.16	1.09	1	0.89	0.81	0.75
4	1.17	1.09	1	0.89	0.81	0.75
6	1.17	1.09	1	0.89	0.81	0.75
10	1.17	1.09	1	0.89	0.80	0.74
16	1.17	1.09	1	0.89	0.80	0.74
25	1.18	1.09	1	0.89	0.80	0.74
35	1.18	1.10	1	0.88	0.80	0.73
50	1.19	1.10	1	0.88	0.80	0.73
70	1.19	1.10	1	0.88	0.80	0.73
95	1.19	1.10	1	0.88	0.79	0.73
120	1.19	1.10	1	0.88	0.79	0.73
150	1.19	1.10	1	0.88	0.79	0.73
185	1.19	1.10	1	0.88	0.79	0.72
240	1.20	1.10	1	0.88	0.79	0.72
300	1.20	1.10	1	0.88	0.79	0.72
400	1.20	1.10	1	0.88	0.79	0.72
500	1.20	1.11	1	0.87	0.79	0.72
630	1.20	1.11	1	0.87	0.79	0.72
800	1.20	1.11	1	0.87	0.79	0.72
1000	1.20	1.11	1	0.87	0.79	0.72

Table 7 Rating factors for variations in soil thermal resistivities for two single-core cables laid in buried duct

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.16	1.09	1	0.91	0.81	0.75
2.50	1.16	1.09	1	0.89	0.81	0.75
4	1.17	1.09	1	0.89	0.81	0.75
6	1.17	1.09	1	0.89	0.81	0.75
10	1.17	1.09	1	0.89	0.80	0.74
16	1.17	1.09	1	0.89	0.80	0.74
25	1.18	1.09	1	0.89	0.80	0.74
35	1.18	1.10	1	0.88	0.80	0.73
50	1.19	1.10	1	0.88	0.80	0.73
70	1.19	1.10	1	0.88	0.80	0.73
95	1.19	1.10	1	0.88	0.79	0.73
120	1.19	1.10	1	0.88	0.79	0.73
150	1.19	1.10	1	0.88	0.79	0.73
185	1.19	1.10	1	0.88	0.79	0.72
240	1.20	1.10	1	0.88	0.79	0.72
300	1.20	1.10	1	0.88	0.79	0.72
400	1.20	1.10	1	0.88	0.79	0.72
500	1.20	1.11	1	0.87	0.79	0.72
630	1.20	1.11	1	0.87	0.79	0.72
800	1.20	1.11	1	0.87	0.79	0.72
1000	1.20	1.11	1	0.87	0.79	0.72

■ **Table 8 Rating factors for variations in soil thermal resistivities for three single-core cables laid direct in ground**

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.14	1.07	1	0.89	0.80	0.75
2.50	1.17	1.08	1	0.89	0.80	0.75
4	1.17	1.09	1	0.88	0.79	0.73
6	1.17	1.09	1	0.88	0.79	0.73
10	1.18	1.09	1	0.88	0.79	0.73
16	1.18	1.10	1	0.88	0.79	0.72
25	1.19	1.10	1	0.88	0.79	0.72
35	1.19	1.10	1	0.88	0.79	0.72
50	1.19	1.10	1	0.88	0.79	0.72
70	1.20	1.11	1	0.88	0.79	0.72
95	1.20	1.11	1	0.87	0.79	0.72
120	1.20	1.11	1	0.87	0.79	0.72
150	1.20	1.11	1	0.87	0.79	0.72
185	1.20	1.11	1	0.87	0.78	0.72
240	1.20	1.11	1	0.87	0.78	0.72
300	1.20	1.11	1	0.87	0.78	0.72
400	1.20	1.11	1	0.87	0.78	0.72
500	1.21	1.11	1	0.87	0.78	0.72
630	1.21	1.11	1	0.87	0.78	0.72
800	1.21	1.11	1	0.87	0.78	0.72
1000	1.21	1.11	1	0.87	0.78	0.72

Table 9 Rating factors for variations in soil thermal resistivities for three single-core cables laid in buried duct

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.08	1.04	1	0.92	0.88	0.84
2.50	1.08	1.05	1	0.93	0.88	0.84
4	1.08	1.05	1	0.93	0.87	0.83
6	1.09	1.06	1	0.93	0.87	0.83
10	1.10	1.06	1	0.93	0.87	0.82
16	1.10	1.06	1	0.93	0.87	0.82
25	1.10	1.06	1	0.93	0.87	0.82
35	1.10	1.06	1	0.93	0.86	0.81
50	1.11	1.06	1	0.92	0.86	0.81
70	1.11	1.06	1	0.92	0.86	0.80
95	1.12	1.06	1	0.92	0.85	0.80
120	1.12	1.06	1	0.91	0.85	0.79
150	1.12	1.07	1	0.91	0.85	0.79
185	1.12	1.07	1	0.91	0.84	0.79
240	1.12	1.07	1	0.91	0.84	0.78
300	1.13	1.07	1	0.91	0.84	0.78
400	1.13	1.07	1	0.91	0.84	0.78
500	1.13	1.07	1	0.90	0.83	0.78
630	1.13	1.07	1	0.90	0.83	0.77
800	1.14	1.08	1	0.90	0.83	0.77
1000	1.14	1.08	1	0.90	0.82	0.77

■ **Table 10 Rating factors for variations in soil thermal resistivities for multi-core cables laid direct in ground**

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.14	1.08	1	0.90	0.83	0.77
2.50	1.15	1.08	1	0.90	0.82	0.76
4	1.15	1.08	1	0.89	0.82	0.76
6	1.16	1.09	1	0.89	0.81	0.75
10	1.16	1.09	1	0.89	0.81	0.75
16	1.17	1.09	1	0.89	0.80	0.74
25	1.17	1.09	1	0.89	0.80	0.74
35	1.18	1.10	1	0.88	0.80	0.74
50	1.18	1.10	1	0.88	0.80	0.74
70	1.18	1.10	1	0.88	0.80	0.74
95	1.18	1.10	1	0.88	0.80	0.73
120	1.18	1.10	1	0.88	0.80	0.73
150	1.18	1.10	1	0.88	0.80	0.73
185	1.18	1.10	1	0.88	0.80	0.73
240	1.19	1.10	1	0.88	0.80	0.73
300	1.19	1.10	1	0.88	0.80	0.73
400	1.19	1.10	1	0.88	0.80	0.73
500	1.19	1.10	1	0.88	0.80	0.73
630	1.19	1.10	1	0.88	0.80	0.73

Table II Rating factors for variations in soil thermal resistivities for multi-core cables laid in buried duct

Nominal area of conductor mm ²	Values of soil thermal resistivity K.m/W					
	1	1.2	1.5	2	2.5	3
1.50	1.05	1.03	1	0.96	0.92	0.88
2.50	1.05	1.03	1	0.95	0.91	0.88
4	1.06	1.03	1	0.95	0.91	0.87
6	1.06	1.03	1	0.95	0.91	0.87
10	1.06	1.04	1	0.95	0.90	0.86
16	1.06	1.04	1	0.95	0.90	0.86
25	1.07	1.04	1	0.95	0.90	0.86
35	1.07	1.04	1	0.94	0.90	0.85
50	1.07	1.04	1	0.94	0.89	0.85
70	1.07	1.04	1	0.94	0.89	0.84
95	1.08	1.04	1	0.94	0.88	0.84
120	1.08	1.05	1	0.94	0.88	0.84
150	1.08	1.05	1	0.93	0.88	0.83
185	1.08	1.05	1	0.93	0.88	0.83
240	1.09	1.05	1	0.93	0.87	0.83
300	1.09	1.05	1	0.93	0.87	0.82
400	1.09	1.05	1	0.93	0.87	0.82
500	1.09	1.05	1	0.93	0.87	0.82
630	1.10	1.06	1	0.92	0.86	0.81

■ **Table 12 Current rating (D.C.) for Two single core cable with XLPE Insulation and rated voltage 1500 V**

Nominal area of conductor mm ²	Buried Direct in the Ground		In Single-Way Ducts		In Air	
	Copper	Aluminium	Copper	Aluminium	Copper	Aluminium
1.50	32	26	27	22	28	22
2.50	42	32	36	28	37	28
4	54		46	36	48	38
6	67	55	57	47	61	50
10	90	69	76	58	83	64
16	115	89	97	75	108	84
25	148	115	124	96	144	112
35	177	137	148	115	176	137
50	208	161	174	135	212	165
70	255	198	213	165	269	209
95	314	243	258	200	342	265
120	358	278	293	227	399	310
150	401	310	328	254	455	352
185	455	352	371	288	528	409
240	528	409	431	334	628	487
300	598	463	487	377	726	561
400	687	533	558	433	857	664
500	790	613	640	497	1008	1782
630	911	705	736	570	1189	921
800	1046	809	843	652	1398	1082
1000	1190	923	956	741	1629	1264

■ **Table 13 Current rating (D.C.) for Two core cable with XLPE Insulation and rated voltage 1500 V**

Nominal area of conductor mm ²	Buried Direct in the Ground		In Single-Way Ducts		In Air	
	Copper	Aluminium	Copper	Aluminium	Copper	Aluminium
1.50	31	26	27	22	27	22
2.50	41	32	35	27	36	28
4	54	42	45	36	48	38
6	67	55	56	46	61	50
10	89	68	75	57	83	64
16	115	89	96	74	108	84
25	147	114	122	95	141	109
35	176	137	146	113	172	133
50	209	162	174	134	209	162
70	256	198	213	165	265	205
95	306	237	255	198	326	253
120	347	269	290	225	375	290
150	389	301	326	252	430	332
185	441	342	370	287	498	386
240	513	397	432	334	595	461
300	581	449	490	379	689	533
400	666	516	563	436	807	626
500	764	593	647	502	948	735
630	883	684	749	580	1123	870

■ **Table 1 Group rating factors for circuits of two single-core cables laid direct in the ground, horizontal formation**

Number of circuits	Spacing between group centres mm				
	Touching	150	300	450	600
2	0.80	0.85	0.90	0.92	0.95
3	0.70	0.78	0.85	0.88	0.91
4	0.64	0.73	0.81	0.86	0.89
5	0.59	0.70	0.79	0.84	0.88
6	0.55	0.67	0.77	0.83	0.87
7	0.53	0.65	0.76	0.82	0.86
8	0.51	0.64	0.75	0.82	0.86
9	0.49	0.63	0.74	0.81	0.85
10	0.48	0.63	0.74	0.81	0.85
11	0.47	0.62	0.73	0.80	0.84
12	0.46	0.61	0.73	0.80	0.84

■ **Table 2 Group rating factors for circuits of three single-core cables laid direct in the ground, horizontal formation**

Number of circuits	Spacing between group centres mm				
	Touching	150	300	450	600
2	0.77	0.81	0.86	0.88	0.89
3	0.67	0.71	0.78	0.81	0.83
4	0.61	0.64	0.72	0.76	0.80
5	0.57	0.60	0.69	0.74	0.77
6	0.53	0.57	0.66	0.72	0.75
7	0.51	0.55	0.64	0.70	0.74
8	0.49	0.53	0.63	0.69	0.73
9	0.47	0.52	0.62	0.68	0.73
10	0.45	0.51	0.61	0.67	0.72
11	0.44	0.50	0.60	0.66	0.72
12	0.43	0.49	0.59	0.65	0.71

■ **Table 3 Group rating factors for circuits of three single-core cables in single-way ducts**

Number of circuits	Spacing between duct group centres mm				
	Touching	150	300	450	600
2	0.78	0.83	0.87	0.90	0.91
3	0.66	0.73	0.78	0.82	0.85
4	0.59	0.67	0.74	0.78	0.82
5	0.55	0.63	0.70	0.76	0.80
6	0.51	0.61	0.68	0.74	0.78
7	0.48	0.58	0.66	0.73	0.77
8	0.46	0.57	0.65	0.72	0.76
9	0.44	0.55	0.64	0.71	0.76
10	0.43	0.54	0.63	0.70	-
11	0.42	0.53	0.62	0.69	-
12	0.40	0.51	0.61	0.69	-

■ **Table 4 Group rating factors for multi-core cables laid direct in the ground, in tier formation**

Number of cables	Number of tiers	Spacing between cable centres mm				
		Touching	150	300	450	600
2	1	0.80	0.84	0.87	0.90	0.91
3	1	0.68	0.74	0.79	0.83	0.86
4	2	0.60	0.66	0.73	0.77	0.79
5	2	0.55	0.61	0.68	0.71	0.73
6	2	0.51	0.57	0.63	0.67	0.69
7	3	0.48	0.54	0.59	0.63	0.64
8	3	0.46	0.51	0.56	0.60	0.61
9	3	0.44	0.48	0.53	0.57	0.58
10	4	0.42	0.47	0.52	0.55	0.56
11	4	0.41	0.46	0.50	0.54	0.55
12	4	0.40	0.45	0.49	0.53	0.54

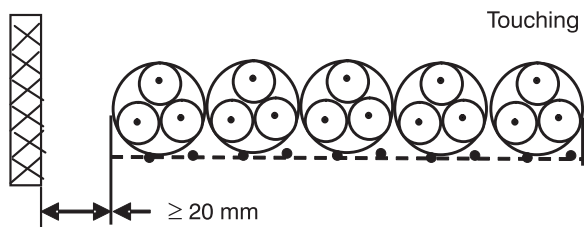
■ **Table 5 Group rating factors for multi-core cables laid direct in the ground, in horizontal formation**

Number of cables	Spacing between cable centres mm				
	Touching	150	300	450	600
2	0.80	0.84	0.87	0.90	0.91
3	0.68	0.74	0.79	0.83	0.86
4	0.62	0.69	0.75	0.80	0.83
5	0.58	0.65	0.72	0.77	0.80
6	0.55	0.62	0.69	0.75	0.78
7	0.52	0.59	0.67	0.73	0.77
8	0.50	0.57	0.66	0.72	0.75
9	0.48	0.55	0.65	0.71	0.75
10	0.46	0.54	0.64	0.70	0.74
11	0.45	0.53	0.63	0.70	0.74
12	0.44	0.52	0.62	0.69	0.73

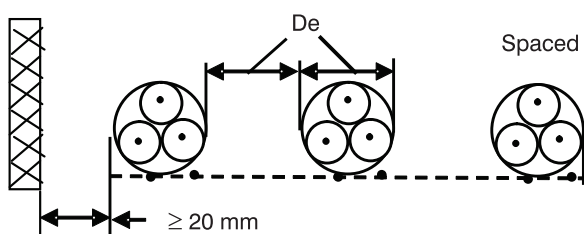
■ **Table 6 Group rating factors for three-core cables in single way ducts in horizontal formation**

Number of cables	Spacing between duct group centres mm				
	Touching	150	300	450	600
2	0.85	0.87	0.90	0.92	0.94
3	0.75	0.79	0.83	0.86	0.88
4	0.69	0.74	0.79	0.83	0.86
5	0.65	0.70	0.76	0.80	0.84
6	0.62	0.67	0.73	0.79	0.83
7	0.59	0.65	0.72	0.78	0.82
8	0.57	0.63	0.70	0.77	0.81
9	0.55	0.62	0.69	0.76	0.80
10	0.54	0.61	0.68	0.75	-
11	0.52	0.60	0.68	0.75	-
12	0.51	0.59	0.67	0.74	-

Table 7 Group rating factors for multi-core cables in air on perforated trays



Number of trays	Number of Cables					
	1	2	3	4	6	9
1	1	0.88	0.82	0.79	0.76	0.73
2	1	0.87	0.80	0.77	0.73	0.68
3	1	0.86	0.79	0.76	0.71	0.66

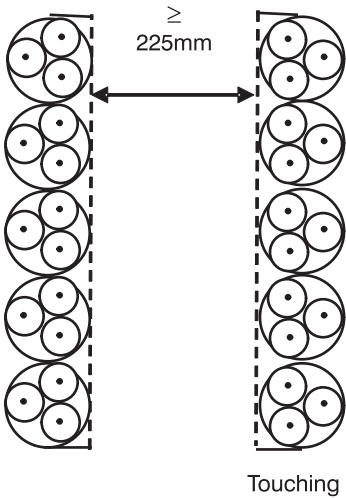


Number of trays	Number of Cables					
	1	2	3	4	6	9
1	1	1	0.98	0.95	0.91	-
2	1	0.99	0.96	0.92	0.87	-
3	1	0.98	0.95	0.91	0.85	-

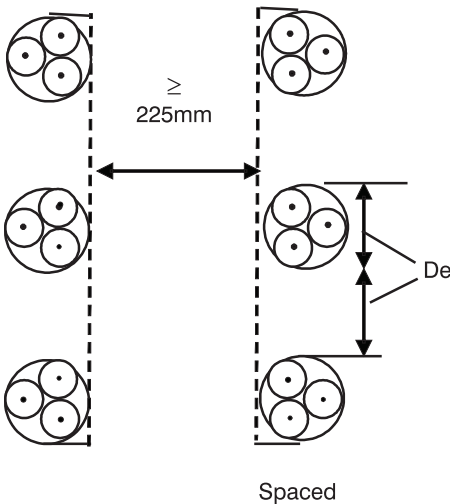
NOTE: 1 Factors apply to single layer groups of cables as shown above. Factors for cables installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.

■ Table 8 Group rating factors for multi-core cables in air on vertical perforated trays



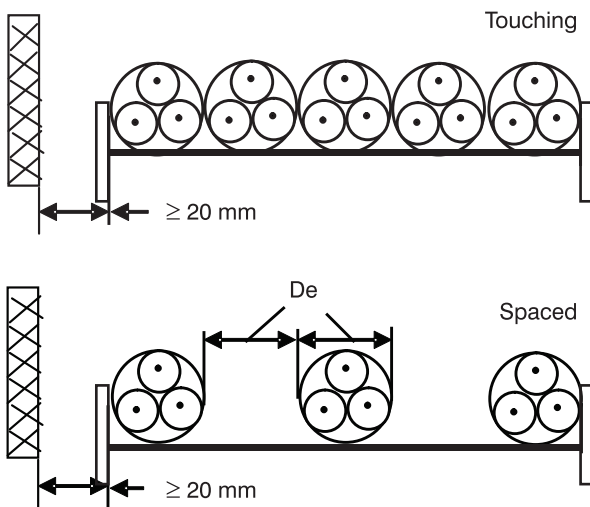
Number of trays	Number of Cables					
	1	2	3	4	6	9
1	1	0.88	0.82	0.78	0.73	0.72
2	1	0.88	0.81	0.76	0.71	0.70



Number of trays	Number of Cables					
	1	2	3	4	6	9
1	1	0.91	0.89	0.88	0.87	-
2	1	0.91	0.88	0.87	0.85	-

NOTE: 1 Factors are given for horizontal spacing between trays of 225 mm with trays mounted back to back. For closer spacing, the factors should be reduced.

Table 9 Group rating factors for multi-core cables in air on ladder supports, cleats, etc

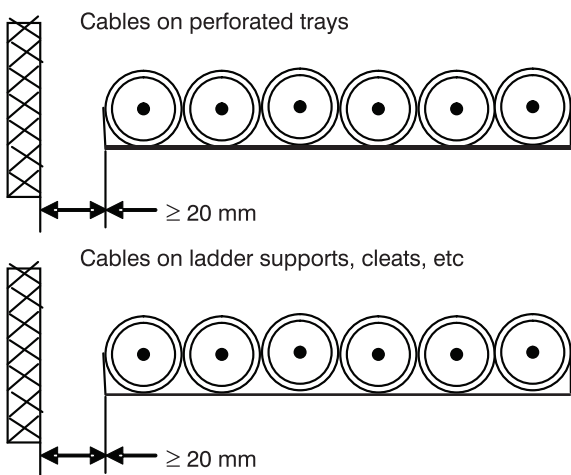


Number of trays	Number of Cables					
	1	2	3	4	6	9
1	1	0.87	0.82	0.80	0.79	0.78
2	1	0.86	0.80	0.78	0.76	0.73
3	1	0.85	0.79	0.76	0.73	0.70
1	1	1	1	1	1	-
2	1	0.99	0.98	0.97	0.96	-
3	1	0.98	0.97	0.96	0.93	-

NOTE: 1 Factors apply to single layer groups of cables as shown above. Factors for cables installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.

Table 10 Group rating factors to be applied for circuits of three single core cables in air flat touching



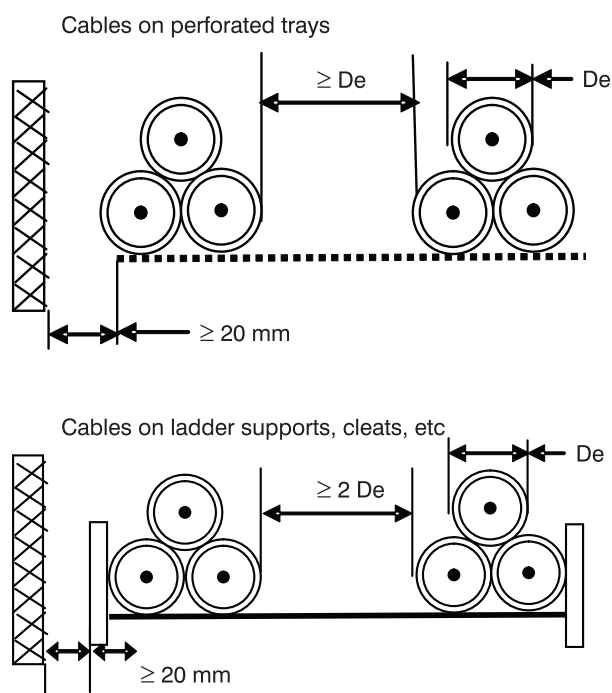
Number of trays	Number of three-phase circuits		
	1	2	3
1	0.98	0.91	0.87
2	0.96	0.87	0.81
3	0.95	0.85	0.78
1	1	0.97	0.96
2	0.98	0.93	0.89
3	0.97	0.90	0.86

NOTE: 1 Factors are given for single layers of cables as shown above. Factors for cables installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.

NOTE: 3 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

Table I I Group rating to be applied for circuits of three single core cables in air on perforated trays and ladder air on perforated trays and ladder supports in trefoil formation



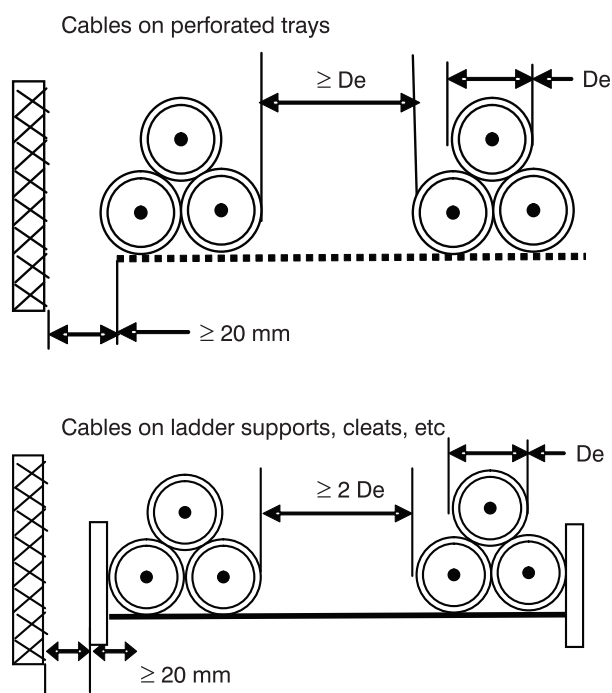
Number of trays	Number of three-phase circuits		
	1	2	3
1	1	0.98	0.96
2	0.97	0.93	0.89
3	0.96	0.92	0.86
1	1	1	1
2	0.97	0.95	0.93
3	0.96	0.94	0.90

NOTE: 1 Factors are given for single layers of trefoil groups as shown above. Factors for trefoil groups installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.

NOTE: 3 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

Table I I Group rating to be applied for circuits of three single core cables in air on perforated trays and ladder air on perforated trays and ladder supports in trefoil formation



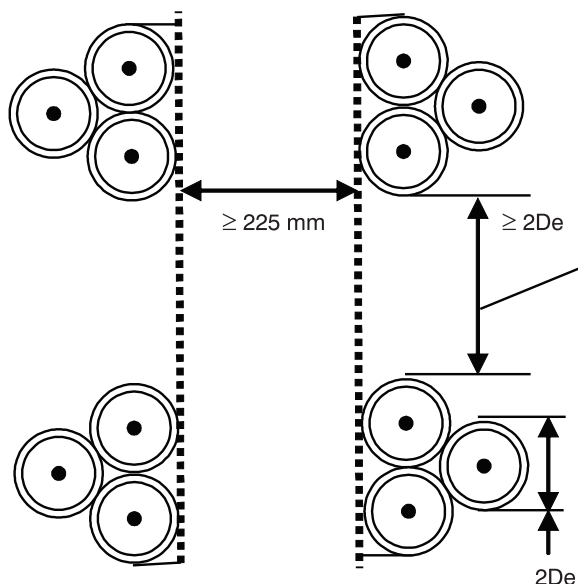
Number of trays	Number of three-phase circuits		
	1	2	3
1	1	0.98	0.96
2	0.97	0.93	0.89
3	0.96	0.92	0.86
1	1	1	1
2	0.97	0.95	0.93
3	0.96	0.94	0.90

NOTE: 1 Factors are given for single layers of trefoil groups as shown above. Factors for trefoil groups installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for vertical spacing between trays of 300 mm and at least 20 mm between trays and wall. For closer spacing, the factors should be reduced.

NOTE: 3 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

Table 12 Group rating factors to be applied for circuits of three single core cables in air on vertical perforated trays in trefoil formation



Number of trays	Number of three-phase circuits		
	1	2	3
1	1	0.91	0.89
2	1	0.90	0.86

NOTE: 1 Factors are given for single layers of trefoil groups as shown above. Factors for trefoil groups installed in more than one layer touching each other will be significantly lower and must be determined by an appropriate method.

NOTE: 2 Factors are given for horizontal spacing between vertical trays of 225 mm with trays mounted back to back. For closer spacing, the factors should be reduced.

NOTE: 3 For circuits having more than one cable in parallel per phase, each three phase set of conductors should be considered as a circuit for the purpose of this table.

A. Cable Inspection

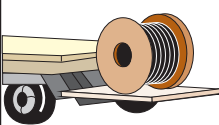
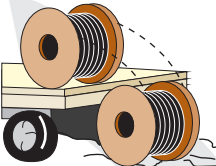
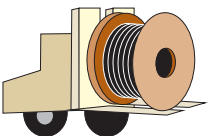
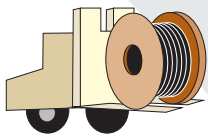
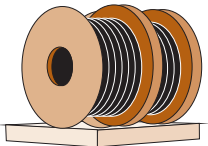
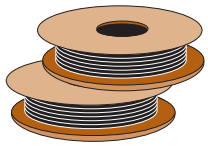
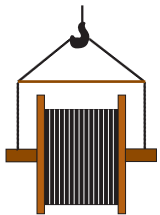
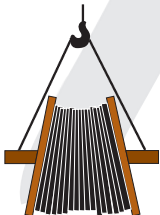
Inspect every cable reel for damage before accepting the shipment. Be particularly alert for cable damage if:

1. A reel lying flat on its side
2. Several reels are stacked
3. Other freight is stacked on a reel
4. Nails have been driven into reel flanges to secure shipping blocks
5. A reel flange is damaged
6. A cable covering is removed, stained or damaged
7. A cable end seal is removed or damaged. A reel has been dropped (hidden damage likely)

B. Cable Handling & Storage

Damage to cables can occur due to the incorrect handling to which the drum and cables may be subjected; causing breakdown of the drum flanges and in exceptional cases, movement of the drum barrel takes place. Once this breakdown of the drum occurs, the cable is immediately exposed to damage. Cables damaged during handling & storage can cause service failures when the subject cable is put to use.

Thus the following is a list of Dos and Don'ts that should be followed while handling and storing the cables before it is put to use.

Dos		Donts	
	When off loading reels from a truck, lower reels carefully using a hydraulic gate, hoist or fork lift truck.		Never drop reels. If reels must be rolled, roll in opposite direction of the cable wraps to keep cable from loosening on the reel.
	If a fork lift is used, approach the reel from the flange side. Position the forks such that the reel is lifted by both reel flanges. Also consideration should be given to, traffic patterns during off-loading & damage during the time in storage.		Do not allow the lift forks to contact the cable. Care must be taken by the fork lift operator not to make sudden turns or stops.
	Cable reels should be stored on hard surface resting on the flanges edge (flanges vertical). Align reel flange to flange and, if possible, arrange so that first in is first out.		Multiple reels stacked on top of each other (Pancake Storage) is not recommended for cable drums. The weight of the stack can total thousands of kgs. can create an enormous load on the bottom reel. Also, damage to three land/ or cable will likely occur when the reel is flipped for transit. A concentration of stress on the reel flange may cause it to break and subsequently damage the cable.
	When using a hoist, install a mandrel through the reel arbor holes and attach asling. Use a spreader bar approximately 6 inches longer than the overall reel width placed between the sling ends just above the reel flanges.		This may lead to the bending of the reel flanges and mashing the cable